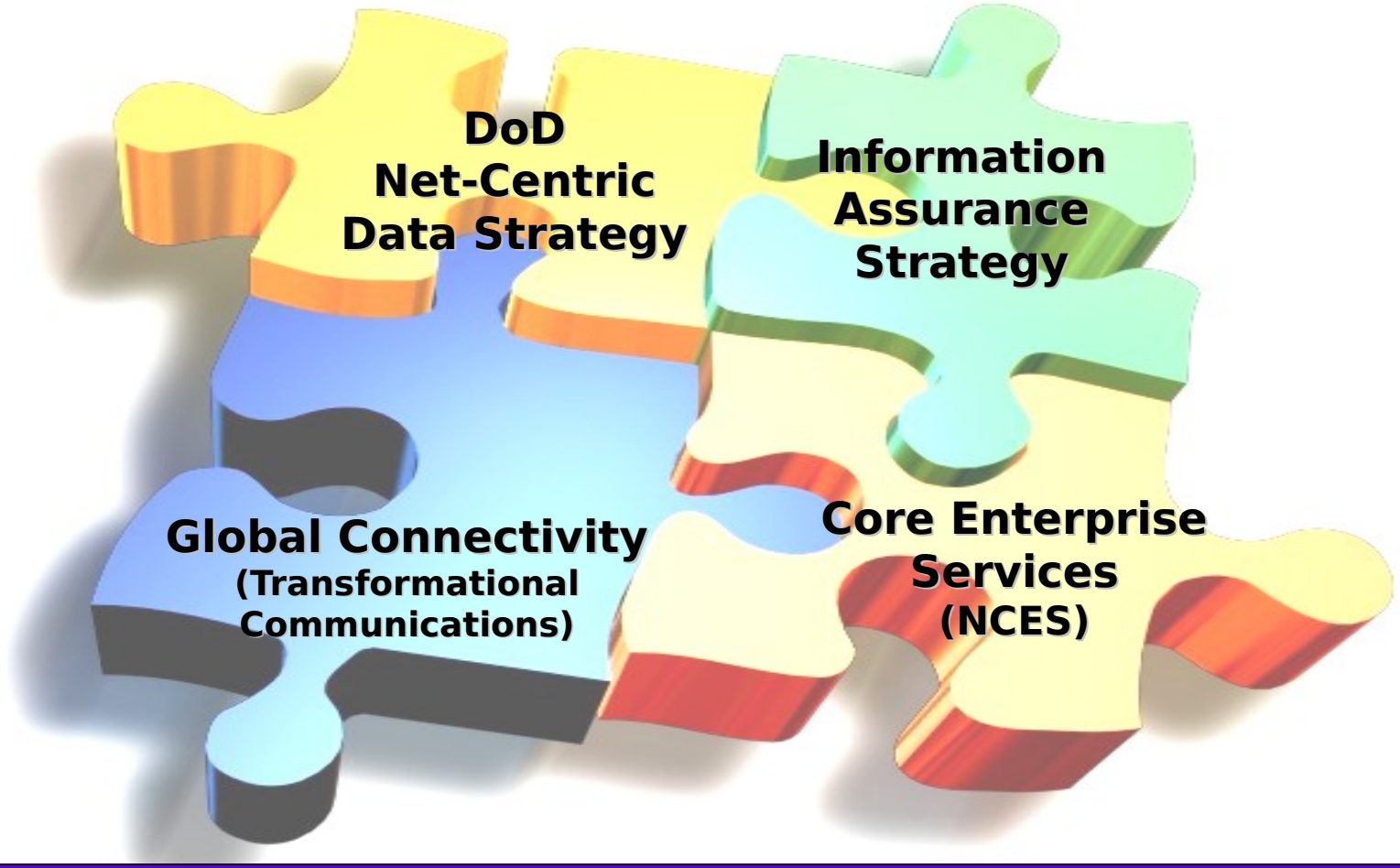
Defense Information Systems Agency
Department of Defense

Net-Centric Enterprise Services (NCES)

20 December 2006

UNCLASSIFIED

Tenets of Net-Centric Warfare



Global connectivity, real-time collaboration, and rapid and continuous information exchange

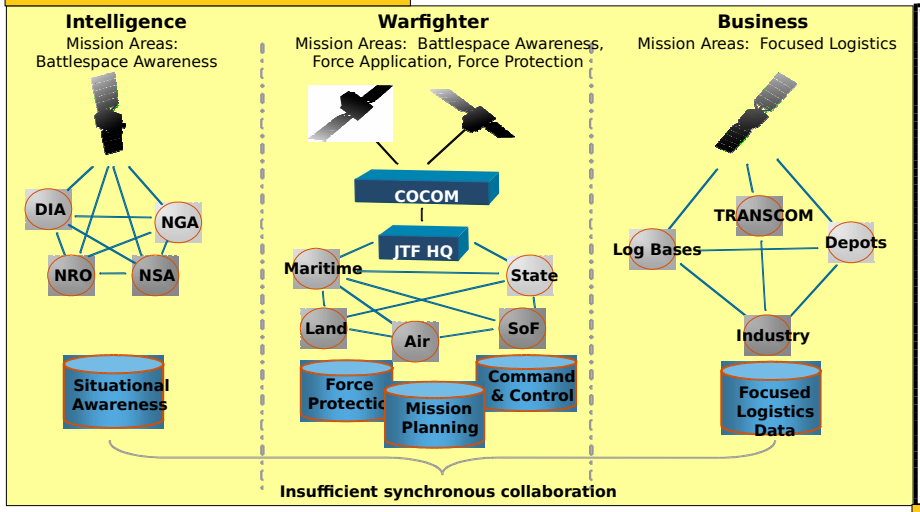
What is NCES?

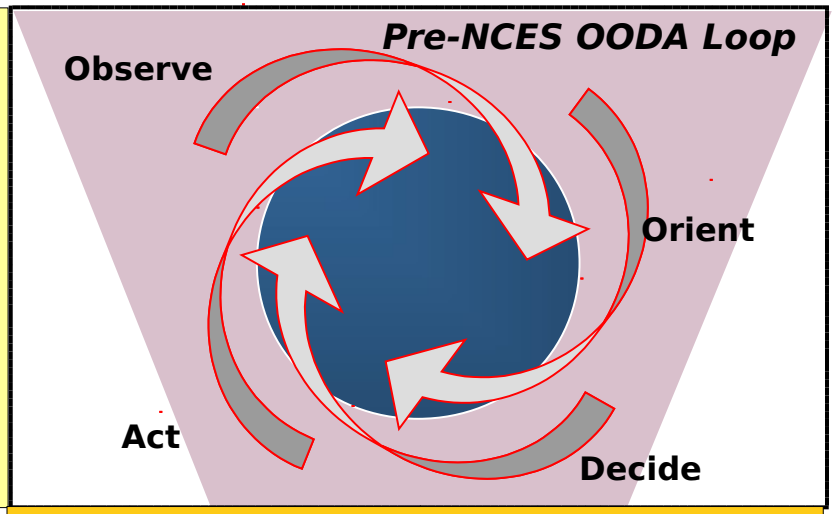
- **NCES enables information sharing by connecting people/systems who <u>have</u> information* with people/ systems who <u>need</u> information**
  - **For people who *have* information, NCES provides global information advertising and delivery services**
  - **For people who *need* information, NCES provides global services to find and receive information**

* Information – data and services (web services)

Why NCES?

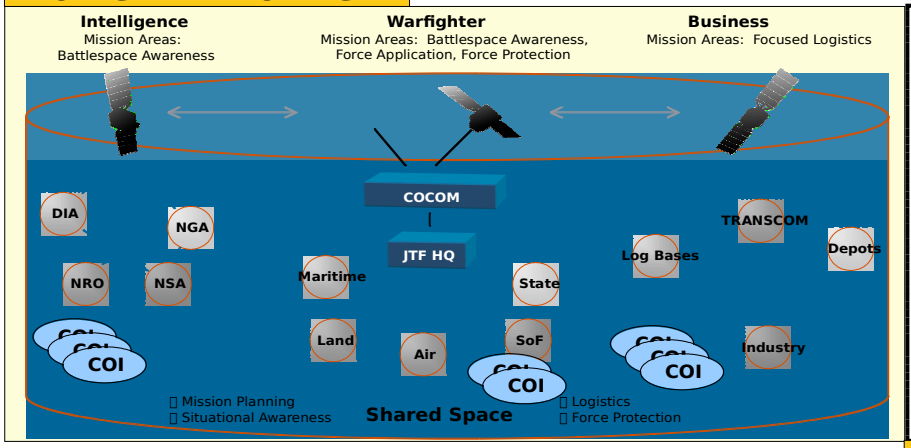
"As-Is" Environment

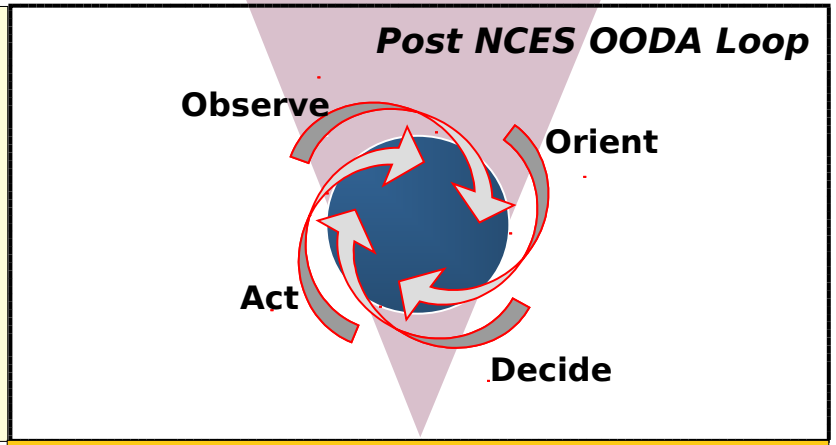




Stove-piped information = Large OODA Loop

"To-Be" Environment





Shared, accessible information = Small OODA Loop

NCES creates a shared information space, increasing decision velocity

NCES Guiding Principles

- **Enable DoD Net-Centric Data Strategy**
- **Speed to deployment – risk management**
  - **Adopt** service specifications
  - **Buy** performance-based, managed services from service providers
  - **Create** absolutely minimize
- **Leverage existing assets to manage risk**
  - Use pilots, experiments, early adopters, proofs of concept to control risk
- **DISA partnership with the Services**
  - Capability to the Tactical Edge
  - Include C/S/A in selecting solutions
  - Participation in pilots, experiments, proofs of concept, early-user-testing
- **Easy, simple, fast governance**
  - Delegate fielding authority of independent capabilities to lowest level
  - Tailored acquisition processes
- **Business Strategy**
  - **Manage a portfolio of services**
  - **Use performance-based service level agreements (SLAs) for managed and adopted services**
  - Exploit competition for commercially available solutions
  - Hosting in GIG or commercial computing nodes as appropriate
  - Provide acquisition flexibility by limiting upfront investment
- **Technical Strategy**
  - Timely access to rapidly evolving technologies
  - **Define service interfaces to ensure open industry standards, loosely coupled services, and evolutionary plug and play architecture**
  - Document interface end-of-life strategy

Risk Management and Control

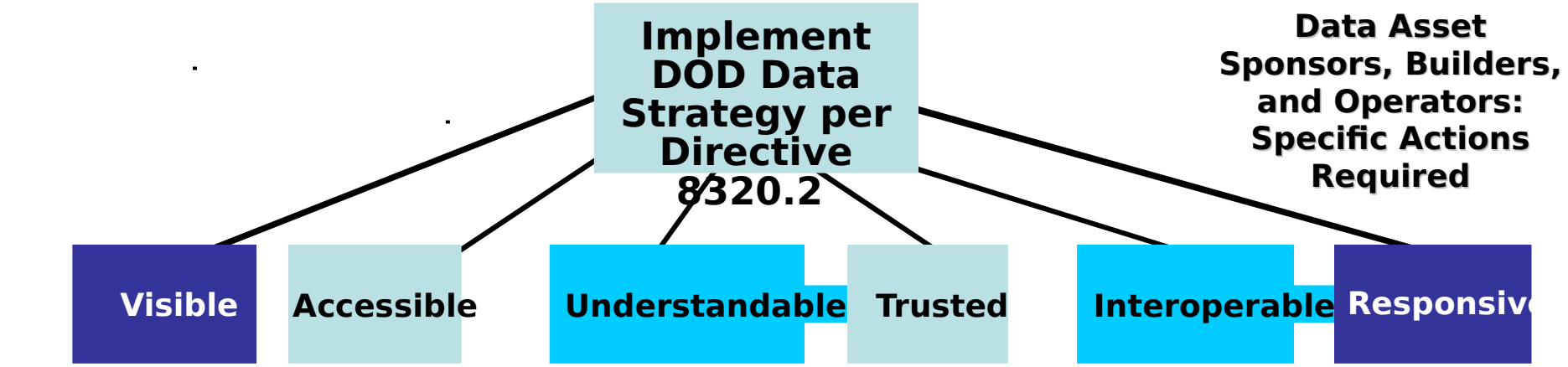
DoD Net-Centric Data Strategy Goals:

Implement DoD Data Strategy per Directive 8320.2

Visible	Is an information resource and associated POC discoverable by most users?
Accessible	Is it connected to the network(s), and are tools readily available to use it?
Understandable	Can it be intelligibly used? Are the semantics well documented?
Trusted	Is the source, accuracy and currency of the resource available to users?
Interoperable	Can it be easily combined or compared with other information or mediated?
Responsive	Is the resource answering user needs? Are robust, direct user feedback mechanisms in place to guide development?

NCES enables the DoD Net-Centric Data Strategy

Data Strategy Goals & Actions Required



- Identify System Assets to Expose
- ✓Determine Tagging Method & Technologies
- ✓Maintain Catalogs
- ✓Tag & Post Asset Info
- ✓Register/Publish Metadata

- Identify Assets for Access
- Select Applications
- ✓Provide Data Access Services
- ✓Post Assets
- ✓Register Service

- ✓Select/Create Taxonomy & Vocabulary
- ✓Develop Information Model & Register
- ✓Develop data Payload packages & Register

- Provide Access
- Usage Controls
- Manage Rights
- ✓Publish Data Asset Pedigree & Authoritative Source Designs

- ✓Register Metadata
- ✓Define & register Metadata Relationships
- ✓Identify Key System Interfaces
- ✓Comply with Net-Centric Interface Specs

- ✓Create & Monitor Robust Feedback Mechanisms
- ✓Closely link Development & Ops

✓ *NCES enables via online services, interface specs and SDKs*

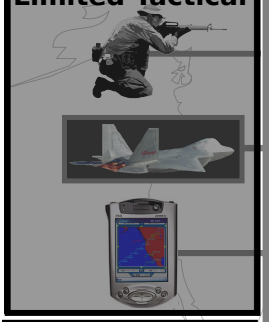
Building Blocks for Success

- **Adopt**
  - **Proven specifications, best practices, and interface definitions**
  - **Existing Service Technologies**
- **Buy**
  - **New commercial managed services**
  - **Use performance-based acquisition**
- **Create**
  - **Creation of new services only if adopt/buy not feasible**

NCES Increment I Product Lines

User/Entity

Limited Tactical



Strategic/Operational

Allied/ Coalition & Multi-national (Limited)

Business Mission Area

Warfighting Mission Area

DoD portion of the Intelligence Mission Area

Information Exchange

Core Enterprise Services

- **Enterprise Collaboration**
- **Enterprise Portal**
- **Content Discovery & Delivery**
- **Service Oriented Architecture Foundation**

The NCES Core Enterprise Services deliver the capabilities that support and enable the Business, Warfighting, and Intelligence Mission Areas to achieve network-centric operations.

Collaboration Product Line Capabilities

- **Text Collaboration (Chat & IM):** Provides the ability for authorized users to initiate and participate in low bandwidth text chat sessions
- **Web Conferencing**
  - **Audio over IP:** Voice conferencing sessions (VOIP).
  - **Video over IP:** Video conferencing sessions.
  - **Whiteboarding & Annotation:** Ability to import and annotate diagrams, pictures, and other objects for viewing by other collaboration participants.
  - **Application Sharing/Broadcasting:** Ability for users to share and broadcast an application running on their computer as part of a collaboration session.
  - **Presence and Awareness:** Ability to identify users available for collaboration sessions.
  - **Non-DoD Participation:** May invite non-DoD personnel into collaboration sessions
- **Session Management:** Provides the management, customization, and control of collaboration sessions and workspaces whether ad hoc or persistent

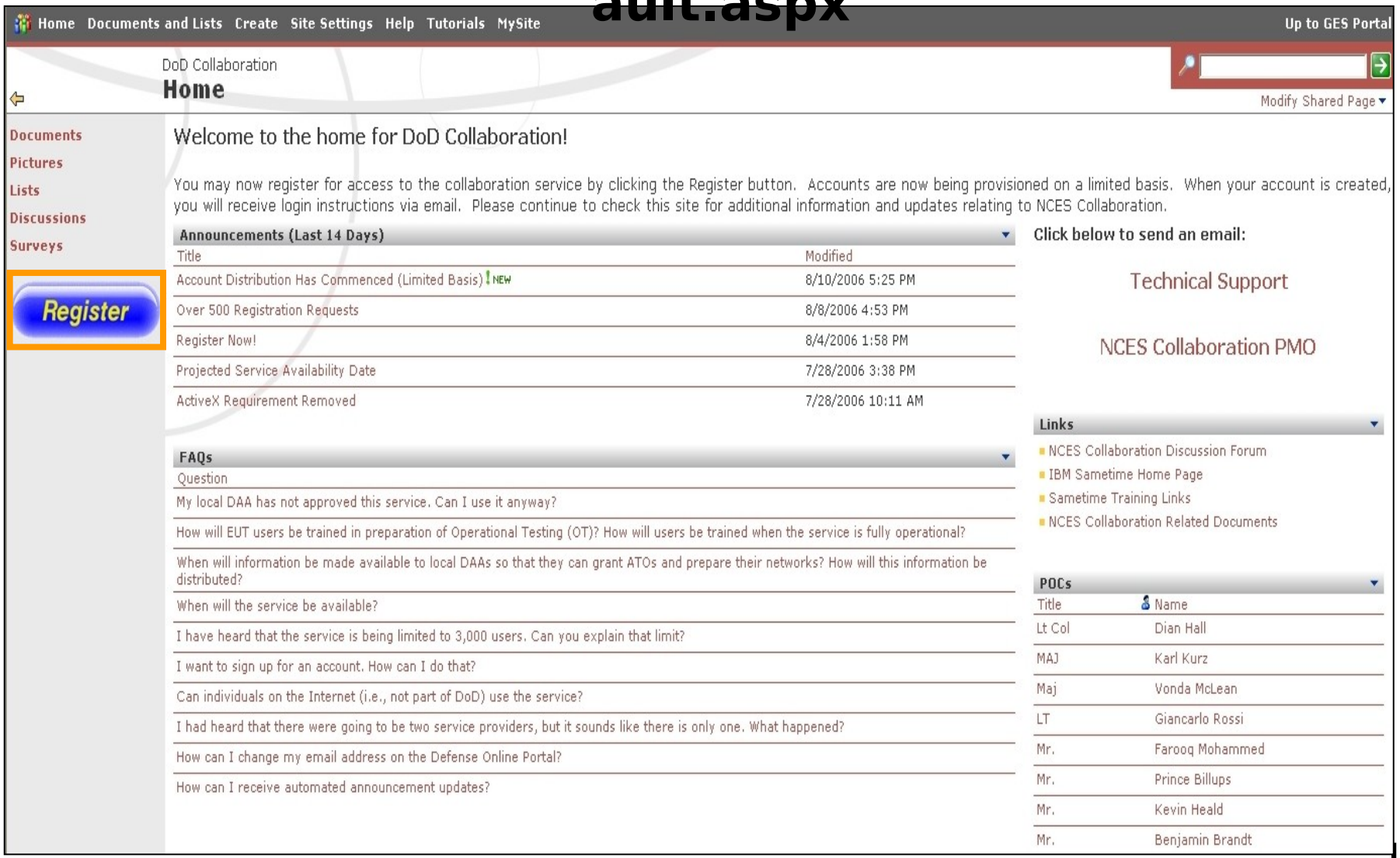
Collaboration Status

Acquisition Goal: Provide "2-button" collaboration solution to DoD enterprise via commercial managed service providers

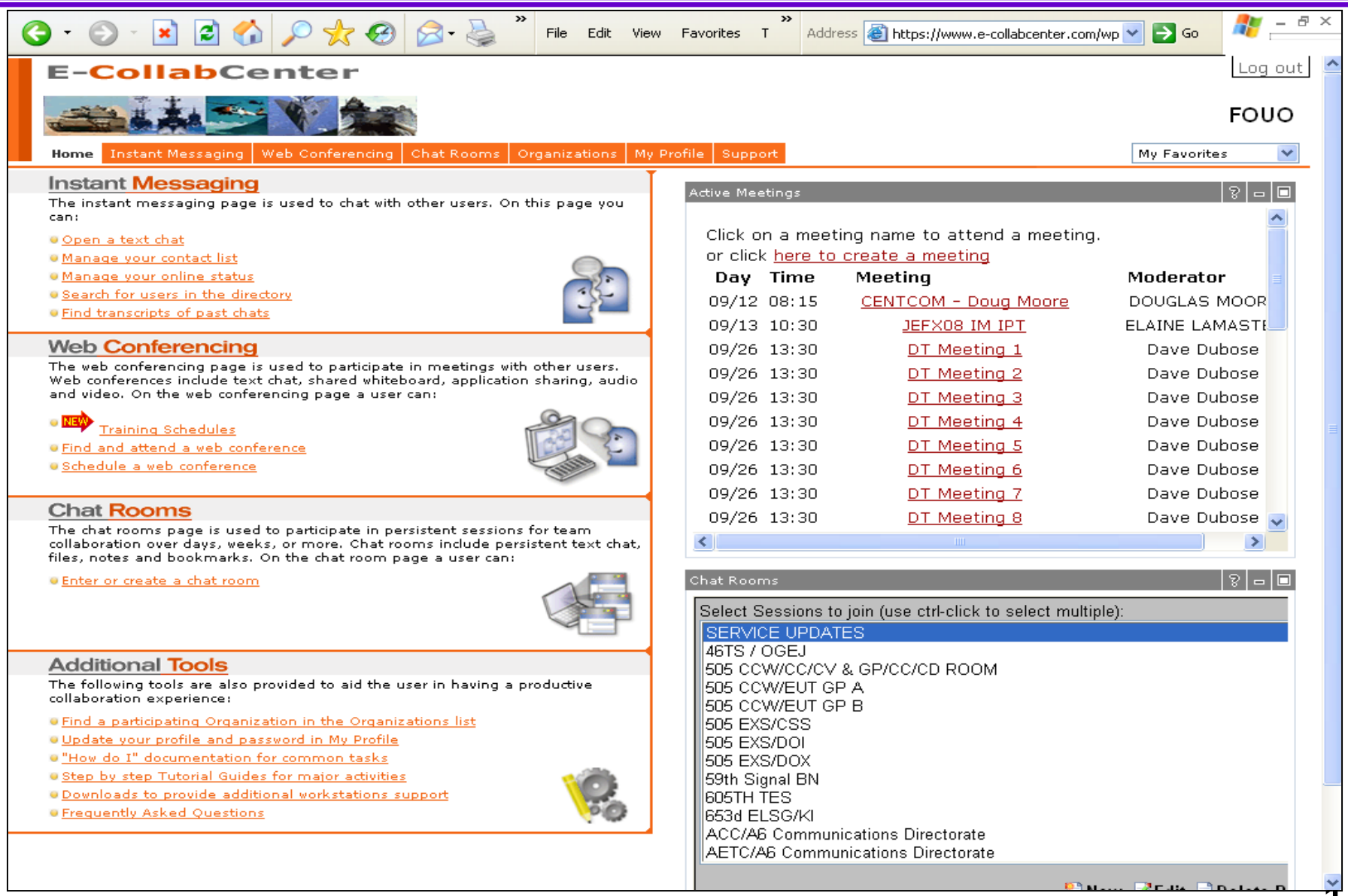
- **First Button** – IBM Lotus Sametime
- **Early User Testing** on NIPRNet -- In Progress
- One year contract w/ two one year extensions
- Lessons learned from previous pilot & NCES CDD determined source selection criteria
- Second Button – Acquisition to follow
- SIPRNet – Early User Testing Feb - May 07

Collaboration Info Page

https://gesportal.dod.mil/sites/Collaboration/default.aspx


Home
Documents and Lists
Create
Site Settings
Help
Tutorials
MySite
Up to GES Portal
DoD Collaboration
Home
Modify Shared Page
Documents
Pictures
Lists
Discussions
Surveys
Register
Welcome to the home for DoD Collaboration!
You may now register for access to the collaboration service by clicking the Register button. Accounts are now being provisioned on a limited basis. When your account is created, you will receive login instructions via email. Please continue to check this site for additional information and updates relating to NCES Collaboration.
Announcements (Last 14 Days)
Title
Modified
Account Distribution Has Commenced (Limited Basis) NEW
8/10/2006 5:25 PM
Over 500 Registration Requests
8/8/2006 4:53 PM
Register Now!
8/4/2006 1:58 PM
Projected Service Availability Date
7/28/2006 3:38 PM
ActiveX Requirement Removed
7/28/2006 10:11 AM
FAQs
Question
My local DAA has not approved this service. Can I use it anyway?
How will EUT users be trained in preparation of Operational Testing (OT)? How will users be trained when the service is fully operational?
When will information be made available to local DAAs so that they can grant ATOs and prepare their networks? How will this information be distributed?
When will the service be available?
I have heard that the service is being limited to 3,000 users. Can you explain that limit?
I want to sign up for an account. How can I do that?
Can individuals on the Internet (i.e., not part of DoD) use the service?
I had heard that there were going to be two service providers, but it sounds like there is only one. What happened?
How can I change my email address on the Defense Online Portal?
How can I receive automated announcement updates?
Click below to send an email:
Technical Support
NCES Collaboration PMO
Links
NCES Collaboration Discussion Forum
IBM Sametime Home Page
Sametime Training Links
NCES Collaboration Related Documents
POCs
Title
Name
Lt Col
Dian Hall
MAJ
Karl Kurz
Maj
Vonda McLean
LT
Giancarlo Rossi
Mr.
Farooq Mohammed
Mr.
Prince Billups
Mr.
Kevin Heald
Mr.
Benjamin Brandt

NCES Collaboration Service Home Page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Address https://www.e-collabcenter.com/wp
Go
E-CollabCenter
Log out
FOUO
Home
Instant Messaging
Web Conferencing
Chat Rooms
Organizations
My Profile
Support
My Favorites
Instant Messaging
The instant messaging page is used to chat with other users. On this page you can:
Open a text chat
Manage your contact list
Manage your online status
Search for users in the directory
Find transcripts of past chats
Web Conferencing
The web conferencing page is used to participate in meetings with other users. Web conferences include text chat, shared whiteboard, application sharing, audio and video. On the web conferencing page a user can:
NEW
Training Schedules
Find and attend a web conference
Schedule a web conference
Chat Rooms
The chat rooms page is used to participate in persistent sessions for team collaboration over days, weeks, or more. Chat rooms include persistent text chat, files, notes and bookmarks. On the chat room page a user can:
Enter or create a chat room
Additional Tools
The following tools are also provided to aid the user in having a productive collaboration experience:
Find a participating Organization in the Organizations list
Update your profile and password in My Profile
"How do I" documentation for common tasks
Step by step Tutorial Guides for major activities
Downloads to provide additional workstations support
Frequently Asked Questions
Active Meetings
Click on a meeting name to attend a meeting.
or click here to create a meeting
Day Time Meeting Moderator
09/12 08:15 CENTCOM - Doug Moore DOUGLAS MOOR
09/13 10:30 JEFX08 IM IPT ELAINE LAMASTE
09/26 13:30 DT Meeting 1 Dave Dubose
09/26 13:30 DT Meeting 2 Dave Dubose
09/26 13:30 DT Meeting 3 Dave Dubose
09/26 13:30 DT Meeting 4 Dave Dubose
09/26 13:30 DT Meeting 5 Dave Dubose
09/26 13:30 DT Meeting 6 Dave Dubose
09/26 13:30 DT Meeting 7 Dave Dubose
09/26 13:30 DT Meeting 8 Dave Dubose
Chat Rooms
Select Sessions to join (use ctrl-click to select multiple):
SERVICE UPDATES
46TS / OGEJ
505 CCW/CC/CV & GP/CC/CD ROOM
505 CCW/EUT GP A
505 CCW/EUT GP B
505 EXS/CSS
505 EXS/DOI
505 EXS/DOX
59th Signal BN
605TH TES
653d ELSG/KI
ACC/A6 Communications Directorate
AETC/A6 Communications Directorate

Content Discovery & Delivery (CD&D) Capabilities

- **Federated Search:** Provides services to find and aggregate information across GIG enterprise data sources.

- **Enterprise Catalog:** Provides services to store and retrieve metadata published from GIG enterprise data sources.

- **Enterprise Content Delivery Network:** Provides services to store, cache, and forward-stage information for fast access.

Architecture (SOA) Foundation Capabilities

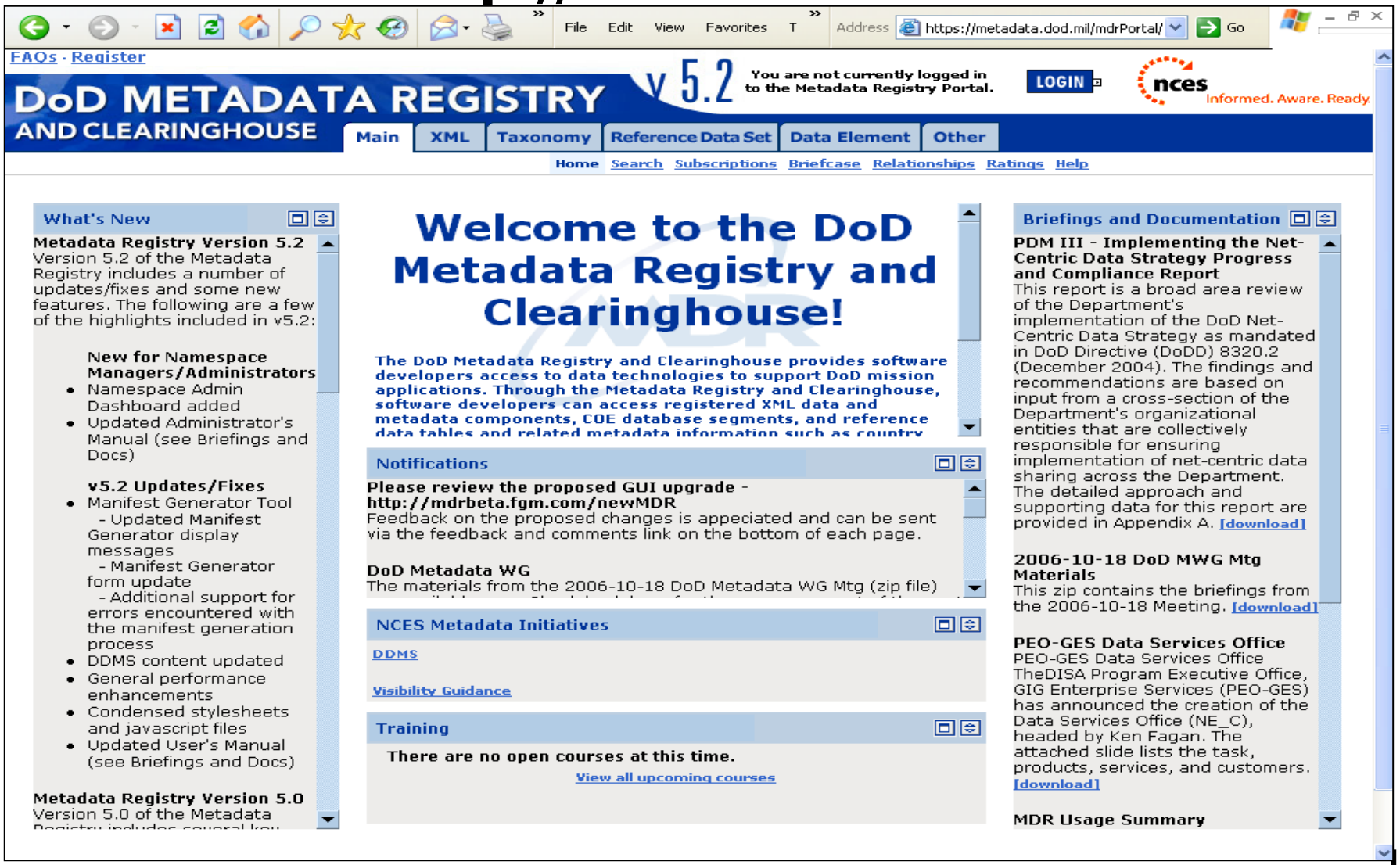
- **Service Security:** Provides services to create, manage and enforce access control policies for GIG enterprise services.
- **Enterprise Service Management:** Provides services to monitor and manage GIG enterprise services. Provides reporting of SLA/QoS information to GIG enterprise service consumers.
- **Service Discovery:** Provides services to publish and find GIG enterprise services registered and categorized in an enterprise registry.
- **Machine-to-Machine Messaging:** Provides services to support reliable information exchange at the machine level.
- **Mediation:** Provides services to support translation between different message formats. Supports the creation and implementation of process workflows across the enterprise.
- **Metadata Registry:** Provides ability for Enterprise systems to discover & manage various metadata artifacts. Promotes data visibility and reusability. Repository for metadata.

DoD Metadata Registry (MDR) and Clearing House

- **"One Stop" Publish, Subscribe and Manage capabilities for Reusable *Structural* Metadata Components**
  - **186K XML items (schemas, stylesheets, etc) registered as of 11/06**
  - **Includes translation logic for mediation & taxonomies**
  - **7600 Registered Users from DoD, IC, DHS, NASA and more**
  - **Unclassified, Secret and Top Secret instances operating**
- **Run Time Support Available**
  - **Web Services**
  - **ebXML Registry capabilities**
- **User feedback driven**
  - **Online user-to-developer**
  - **DoD Metadata Working Group**
  - **Version 5.2 now available**

DoD Metadata Registry (MDR) and Clearing House

http://metadata.dod.mil


File Edit View Favorites T
Address https://metadata.dod.mil/mdrPortal/
Go
FAQs · Register
DoD METADATA REGISTRY AND CLEARINGHOUSE
v 5.2
You are not currently logged in to the Metadata Registry Portal.
LOGIN
nces
Informed. Aware. Ready.
Main
XML
Taxonomy
Reference Data Set
Data Element
Other
Home Search Subscriptions Briefcase Relationships Ratings Help
What's New
Metadata Registry Version 5.2
Version 5.2 of the Metadata Registry includes a number of updates/fixes and some new features. The following are a few of the highlights included in v5.2:
New for Namespace Managers/Administrators
Namespace Admin Dashboard added
Updated Administrator's Manual (see Briefings and Docs)
v5.2 Updates/Fixes
Manifest Generator Tool - Updated Manifest Generator display messages - Manifest Generator form update - Additional support for errors encountered with the manifest generation process
DDMS content updated
General performance enhancements
Condensed stylesheets and javascript files
Updated User's Manual (see Briefings and Docs)
Metadata Registry Version 5.0
Version 5.0 of the Metadata
Welcome to the DoD Metadata Registry and Clearinghouse!
The DoD Metadata Registry and Clearinghouse provides software developers access to data technologies to support DoD mission applications. Through the Metadata Registry and Clearinghouse, software developers can access registered XML data and metadata components, COE database segments, and reference data tables and related metadata information such as country
Notifications
Please review the proposed GUI upgrade - http://mdrbeta.fgm.com/newMDR
Feedback on the proposed changes is appeciated and can be sent via the feedback and comments link on the bottom of each page.
DoD Metadata WG
The materials from the 2006-10-18 DoD Metadata WG Mtg (zip file)
NCES Metadata Initiatives
DDMS
Visibility Guidance
Training
There are no open courses at this time.
View all upcoming courses
Briefings and Documentation
PDM III - Implementing the Net-Centric Data Strategy Progress and Compliance Report
This report is a broad area review of the Department's implementation of the DoD Net-Centric Data Strategy as mandated in DoD Directive (DoDD) 8320.2 (December 2004). The findings and recommendations are based on input from a cross-section of the Department's organizational entities that are collectively responsible for ensuring implementation of net-centric data sharing across the Department. The detailed approach and supporting data for this report are provided in Appendix A. [download]
2006-10-18 DoD MWG Mtg Materials
This zip contains the briefings from the 2006-10-18 Meeting. [download]
PEO-GES Data Services Office
PEO-GES Data Services Office TheDISA Program Executive Office, GIG Enterprise Services (PEO-GES) has announced the creation of the Data Services Office (NE_C), headed by Ken Fagan. The attached slide lists the task, products, services, and customers. [download]
MDR Usage Summary

CD&D and SOA Foundation Status

- **Content Discovery and Delivery (CD&D):** Existing Content Staging Program (deployed worldwide) transitioning to CD&D
  - Google Pilot providing Content Discovery
  - Akamai Pilot providing Content Delivery
  - Planned managed services buy after Milestone B

- **SOA Foundation (SOAF):** Early Capabilities Baseline (ECB) established at DECC-Columbus, Ohio in September 2005
  - Available on NIPRnet and SIPRNet
  - Provides reference implementation for other DoD programs to learn along with DISA/NCES prior to future acquisition via service provider(s)
  - Planned managed services buy after Milestone B
  - Released 'Recommended Standards for Implementation of GIG Enterprise Services' on 12 June 2006
    - Defines current commercial standards for use including: Web Services, Mediation formats, Service Registry, Security, Messaging, etc.

Acquiring Managed Services for CD&D / SOAF

- **NCES Industry Day held 10 Mar 06 to provide overview of NCES requirements for CD&D and SOAF managed services**
  - **Informed Industry of our NCES vision and requirements**
  - **Began a constructive dialog with industry to ensure that the goals of this acquisition are clearly understood and achievable**
  - **Solicited industry inputs on issues and contracting strategy to make this a successful effort**
- **SOA Foundation and Content Discovery & Delivery Way Ahead**
  - **Evaluate Government Managed Service candidates for adoption**
  - **Release RFPs for Commercial Managed Service providers**
  - **Develop SLAs and/or award Performance Based Contracts for managed services**
- **Draft RFP with Statement of Objectives for Industry Comment – target Jan 2007 – Post Milestone B**
- **Contract Awards in 4th Quarter Fiscal Year 2007**

Portal Capabilities

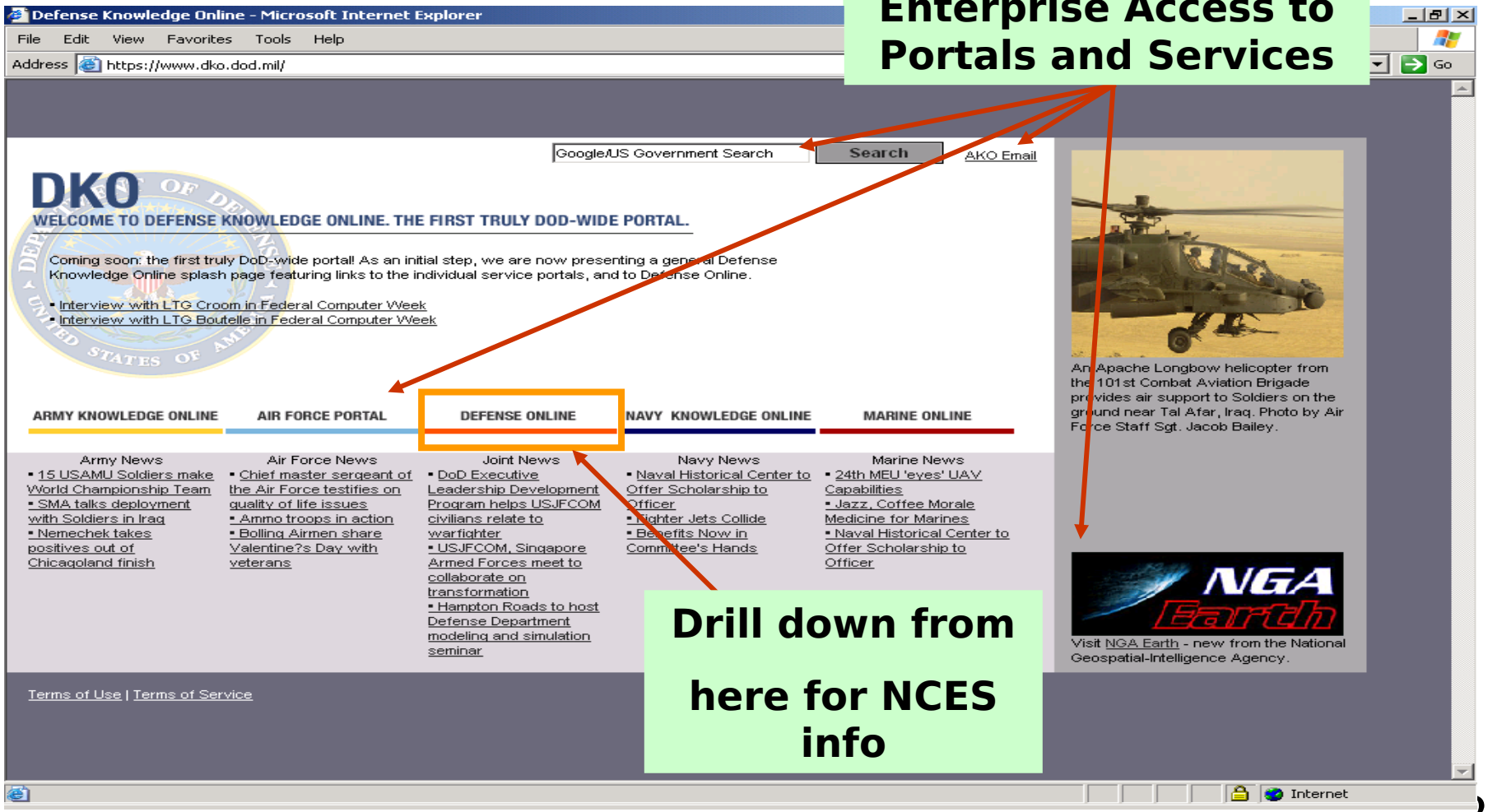
- **Content Discovery User Interface:** Enables GIG users to find and retrieve data from GIG enterprise data sources.

- **Collaboration User Interface:** Enables GIG users to access collaborative capabilities including document sharing, text chat, and workgroups.

- **User Profiling and Customization Interfaces:** Provides GIG users the ability to customize and configure portal presentation settings based upon their preferences.

DKO Splash Page / Status

- **Adopt AKO and Converge to Defense Knowledge Online (DKO)**
- **(https://www.dko.dod.mil/)**


Enterprise Access to Portals and Services
Defense Knowledge Online - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address https://www.dko.dod.mil/
Go
Google/US Government Search
Search
AKO Email
DKO
WELCOME TO DEFENSE KNOWLEDGE ONLINE. THE FIRST TRULY DOD-WIDE PORTAL.
Coming soon: the first truly DoD-wide portal! As an initial step, we are now presenting a general Defense Knowledge Online splash page featuring links to the individual service portals, and to Defense Online.
Interview with LTG Croom in Federal Computer Week
Interview with LTG Boutelle in Federal Computer Week
ARMY KNOWLEDGE ONLINE
AIR FORCE PORTAL
DEFENSE ONLINE
NAVY KNOWLEDGE ONLINE
MARINE ONLINE
Army News
15 USAMU Soldiers make World Championship Team
SMA talks deployment with Soldiers in Iraq
Nemechek takes positives out of Chicagoland finish
Air Force News
Chief master sergeant of the Air Force testifies on quality of life issues
Ammo troops in action
Bolling Airmen share Valentine?s Day with veterans
Joint News
DoD Executive Leadership Development Program helps USJFCOM civilians relate to warfighter
USJFCOM, Singapore Armed Forces meet to collaborate on transformation
Hampton Roads to host Defense Department modeling and simulation seminar
Navy News
Naval Historical Center to Offer Scholarship to Officer
Fighter Jets Collide
Benefits Now in Committee's Hands
Marine News
24th MEU 'eyes' UAV Capabilities
Jazz, Coffee Morale Medicine for Marines
Naval Historical Center to Offer Scholarship to Officer
An Apache Longbow helicopter from the 101st Combat Aviation Brigade provides air support to Soldiers on the ground near Tal Afar, Iraq. Photo by Air Force Staff Sgt. Jacob Bailey.
NGA Earth
Visit NGA Earth - new from the National Geospatial-Intelligence Agency.
Terms of Use | Terms of Service
Drill down from here for NCES info
Internet

Early User Environment – To Become a Participant

Defense Online

Portal to the Global Information Grid

- Access GIG Services
- About Defense Online
- Why Register?
- Defense Online Registration
- Contact Us
- Site Map
- NCES Home
- Home

(Registered members click image to log on)

What is Defense Online?

Defense Online is the service gateway to access the Global Information Grid. This portal provides a framework for the DoD user to:

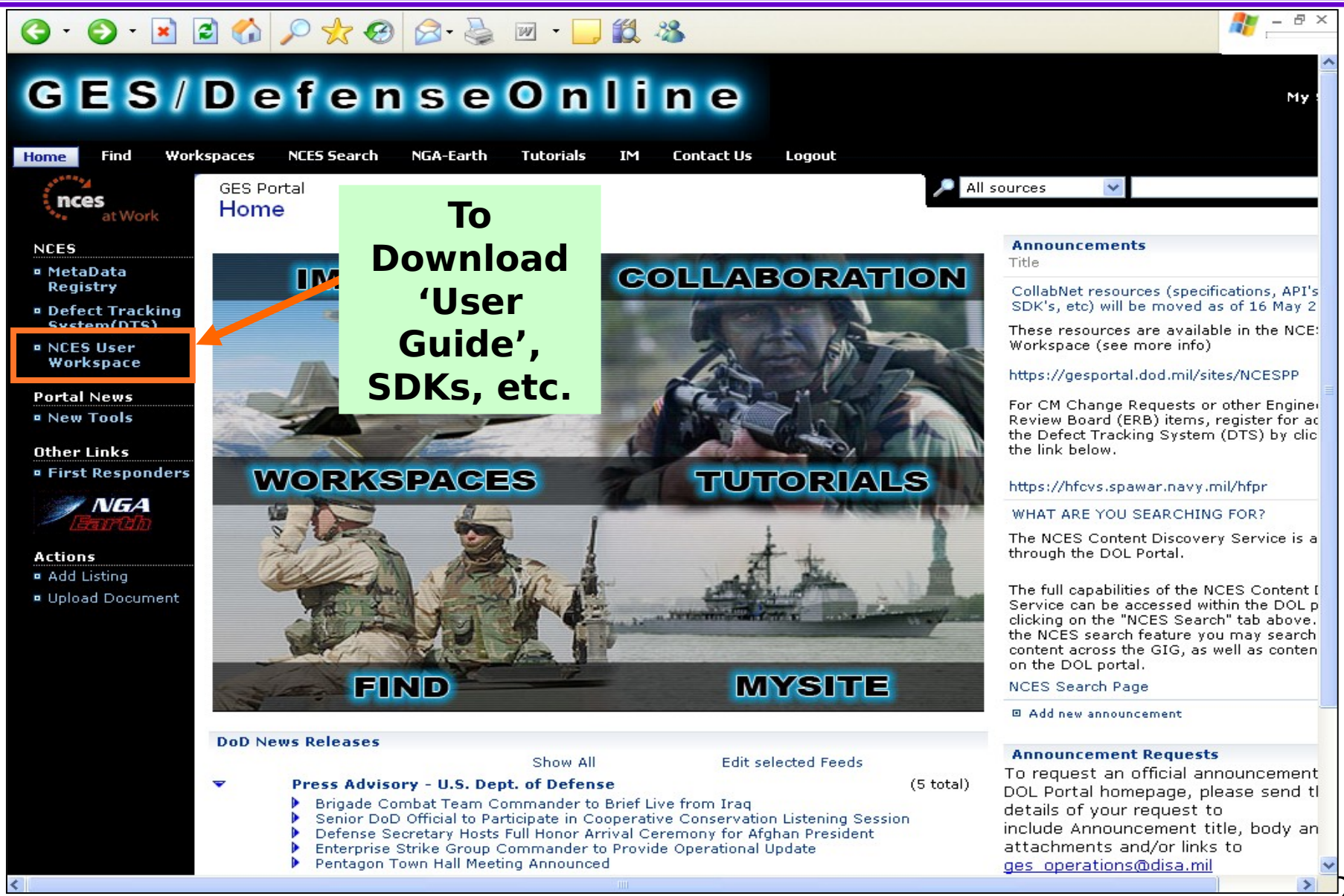
- Access tools developed to boost productivity
- Publish content and build custom work flow
- Incorporate NCES Pilot Services into business processes

Powered by nces Informed. Aware. Ready.

Brought to you by DISA

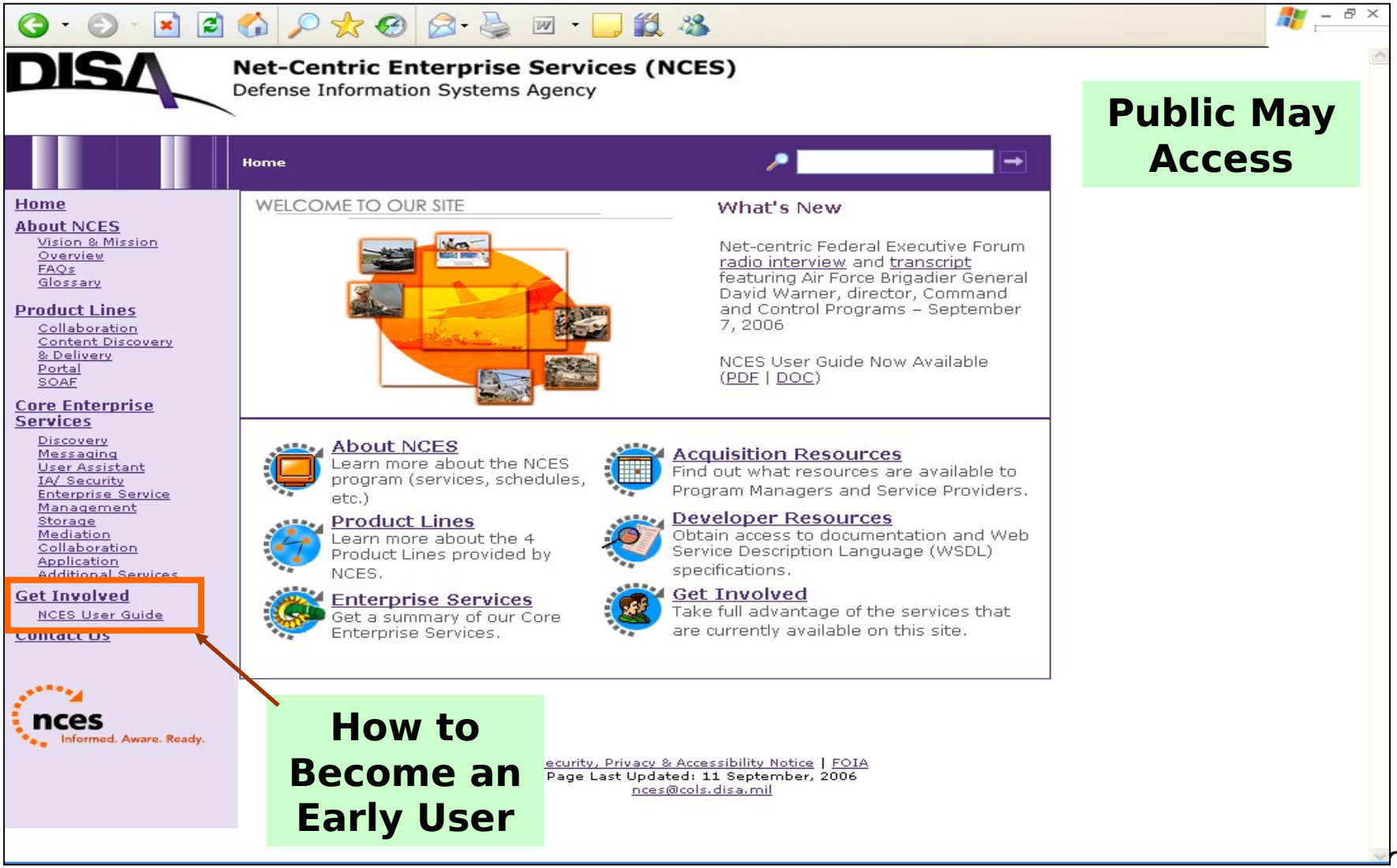
Security, Privacy & Accessibility Notice | FOIA
Page Last Updated: 15 December, 2005
nces@cols.disa.mil

Early User Environment – To Begin Participating


GES/DefenseOnline
Home
Find
Workspaces
NCES Search
NGA-Earth
Tutorials
IM
Contact Us
Logout
nces at Work
NCES
MetaData Registry
Defect Tracking System(DTS)
NCES User Workspace
Portal News
New Tools
Other Links
First Responders
NGA Earth
Actions
Add Listing
Upload Document
GES Portal
Home
All sources
To Download 'User Guide', SDKs, etc.
COLLABORATION
WORKSPACES
TUTORIALS
FIND
MYSITE
Announcements
Title
CollabNet resources (specifications, API's SDK's, etc) will be moved as of 16 May 2
These resources are available in the NCE Workspace (see more info)
https://gesportal.dod.mil/sites/NCESPP
For CM Change Requests or other Engine Review Board (ERB) items, register for ac the Defect Tracking System (DTS) by clic the link below.
https://hfcvs.spawar.navy.mil/hfpr
WHAT ARE YOU SEARCHING FOR?
The NCES Content Discovery Service is a through the DOL Portal.
The full capabilities of the NCES Content D Service can be accessed within the DOL p clicking on the "NCES Search" tab above. the NCES search feature you may search content across the GIG, as well as conten on the DOL portal.
NCES Search Page
Add new announcement
Announcement Requests
To request an official announcement DOL Portal homepage, please send tl details of your request to include Announcement title, body an attachments and/or links to ges_operations@disa.mil
DoD News Releases
Show All
Edit selected Feeds
Press Advisory - U.S. Dept. of Defense
(5 total)
Brigade Combat Team Commander to Brief Live from Iraq
Senior DoD Official to Participate in Cooperative Conservation Listening Session
Defense Secretary Hosts Full Honor Arrival Ceremony for Afghan President
Enterprise Strike Group Commander to Provide Operational Update
Pentagon Town Hall Meeting Announced

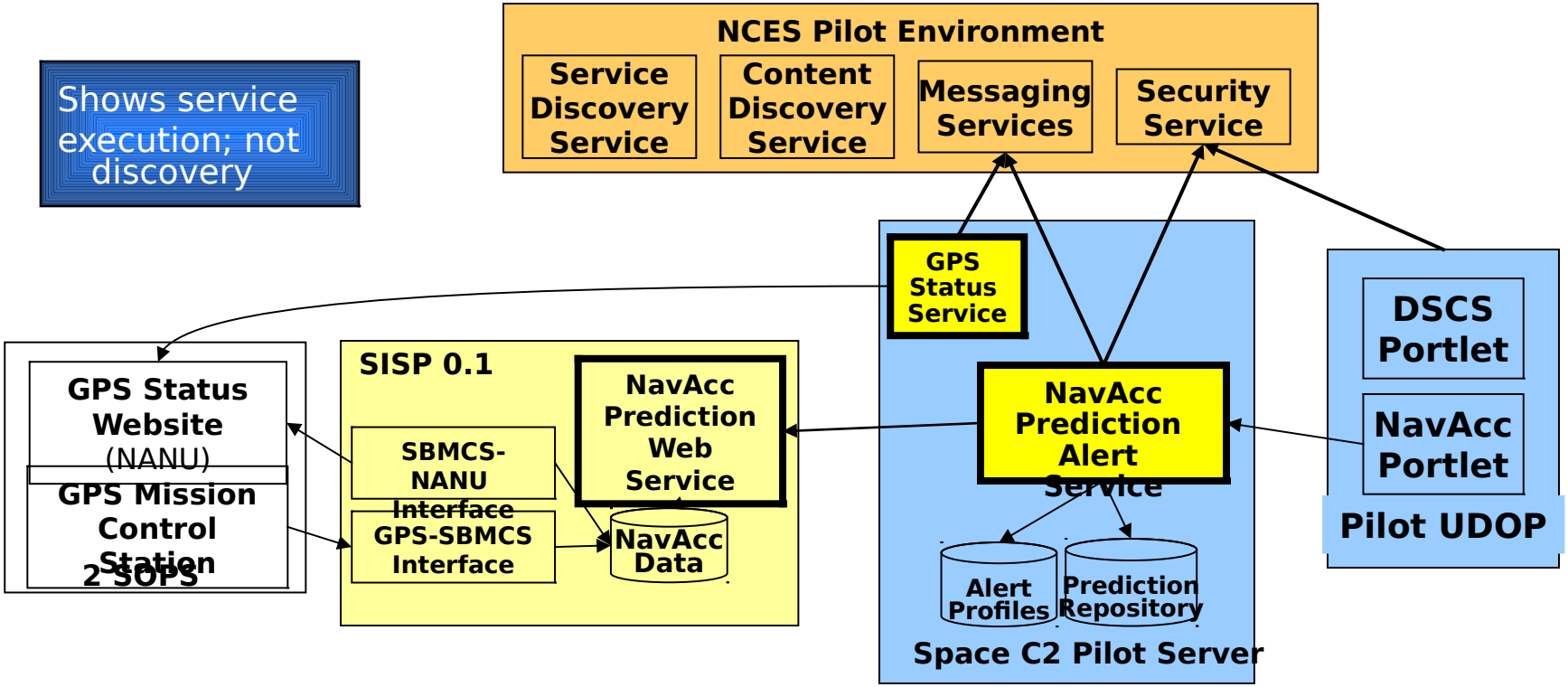
NCES Information + User Guide -- Public 'Page'

- **http://www.disa.mil/nces/**



Thread

Provide Navigational Accuracy Prediction Alert Service



NCES Service

COI

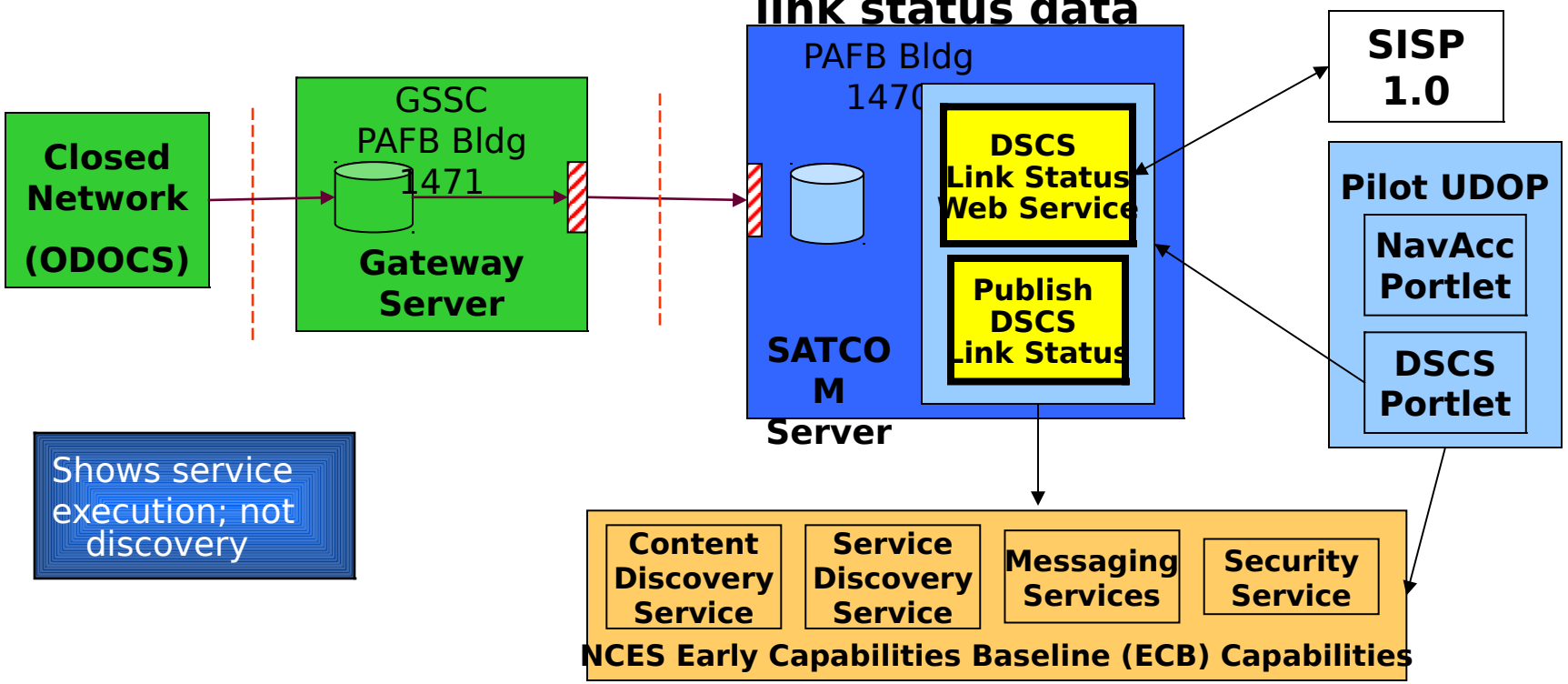
COI Service

GPS Thread Advantages

- Strong user advocacy for capability (14th AF)
- Provides risk reduction on use of NCES Core Enterprise Services
- Demonstrates value of leveraging existing services to create needed mission capability
- Risk reduction for Program of Record as a Service Provider

C2 SSA COI Pilot DSCS Thread

Provide Machine-to-machine exchange of DSCS link status data

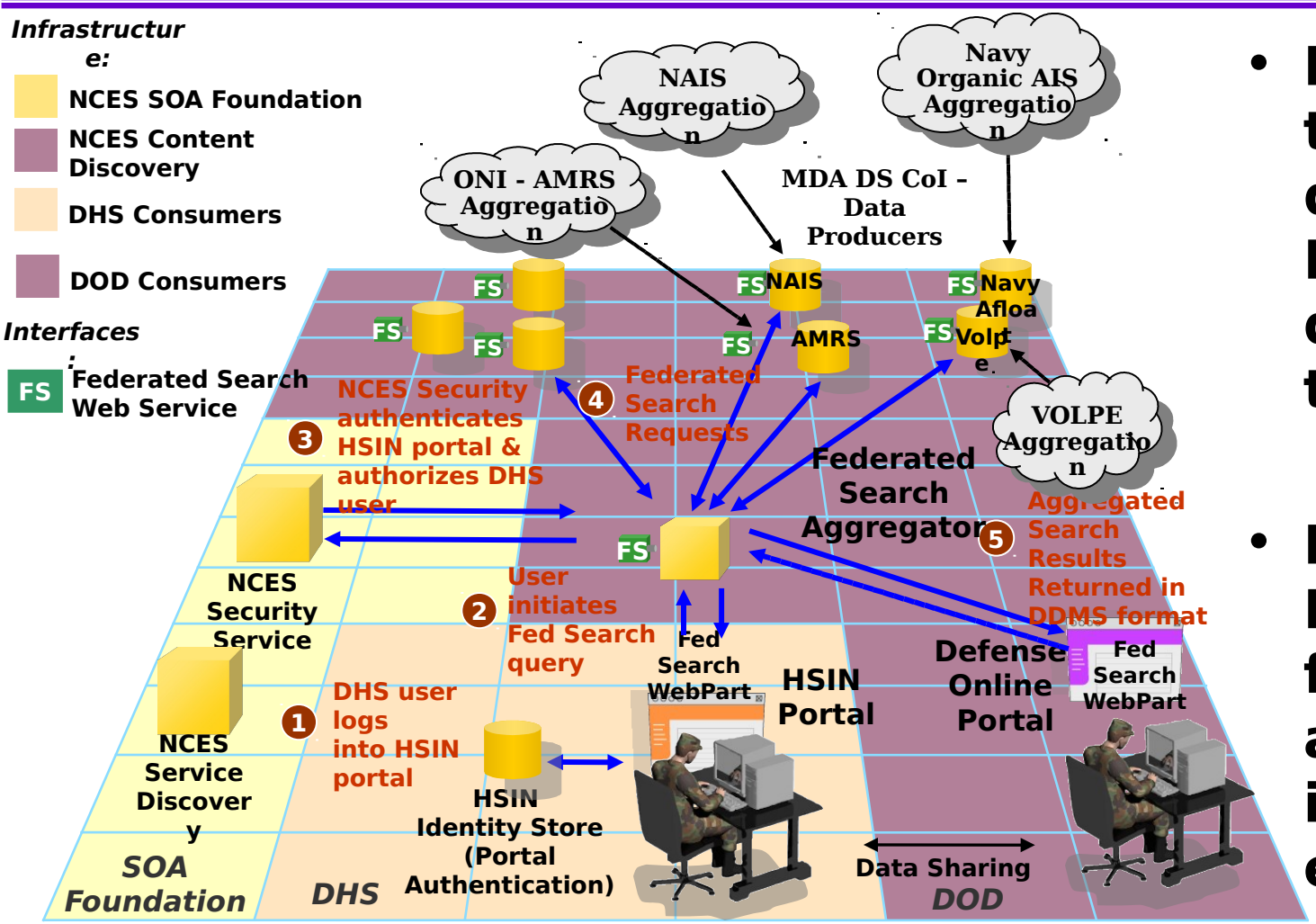


NCES Service
Army
COI
COI Service
USSTRATCOM

DSCS Thread Advantages

- Exposes DSCS link status from authoritative source in accordance with DoD Data Strategy
- Provides risk reduction on use of NCES Core Enterprise Services
- Cross-service initiative

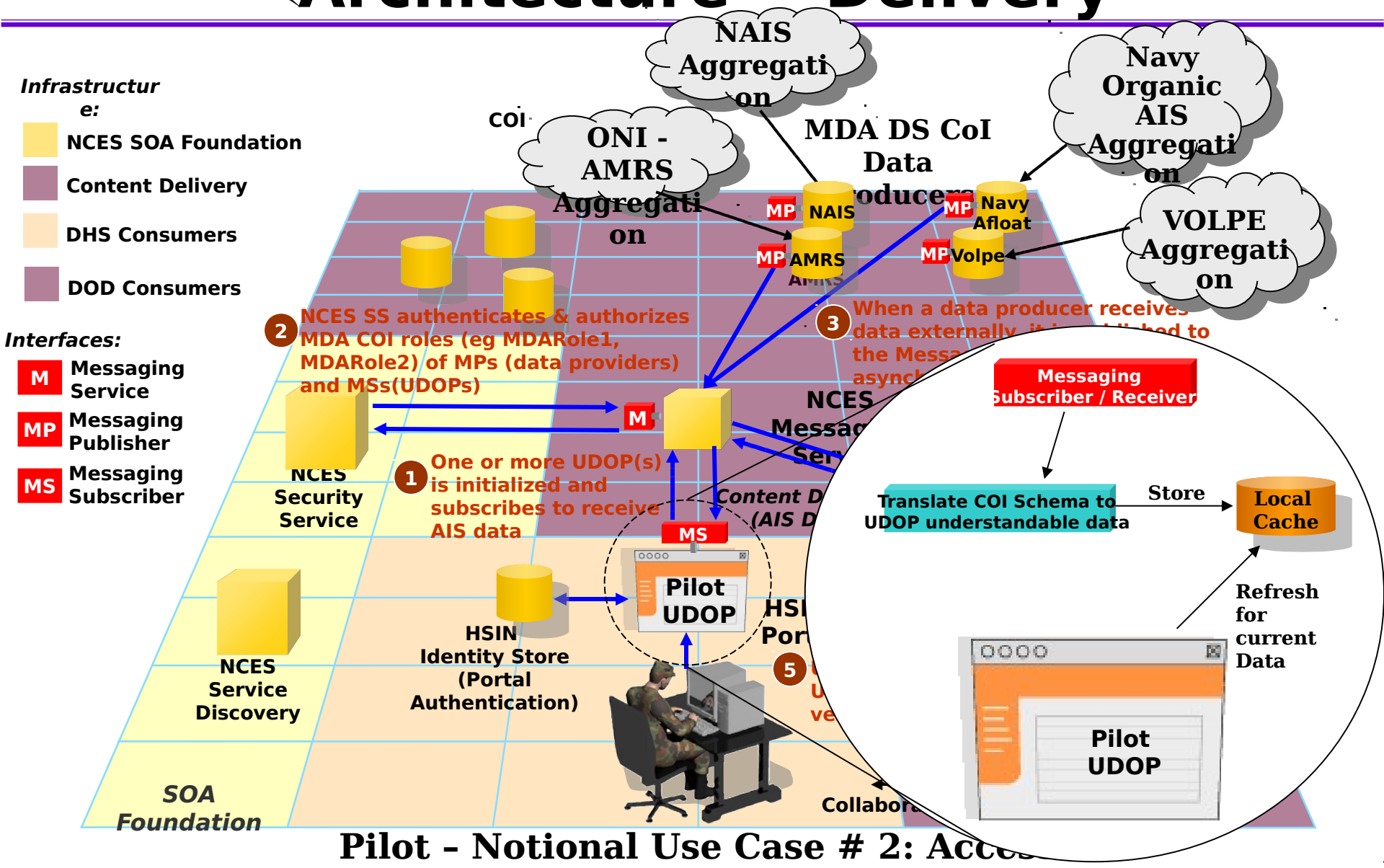
MDA DS COI High-Level Pilot Architecture -- Discovery



- **NCES CD&D ties disparate DoD and DHS data sources together**
- **NCES SOA Foundation facilitates and protects information exchanges**

MDA COI is using CD&D and SOA Foundation to enable information sharing

MDA DS COI High-Level Pilot Architecture -- Delivery



Pilot – Notional Use Case # 2: Acces

Access of AIS Data, display in Pilot UDOP

Summary

- **NCES is essential to the Department's ability to implement a network-based information environment that will meet the requirement for information superiority and decision superiority**
- **NCES will provide the core common utility services that Community of Interest capabilities developers will use in the development of mission applications**
- **NCES is soliciting feedback on current capabilities in order to refine capabilities for Increments I and II.**

NCES is the foundation for improved knowledge sharing and future knowledge creation

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